

Nov. 22, 2006 1:31PM INGRASSIA FISHER & LORENZ PC
Appl. No. 10/644,523
Amdt. Dated May 30, 2006
Reply to Office Action of February 28, 2006

No. 5081 P. 13

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REMARKS

Reexamination and reconsideration in view of the foregoing amendments and following remarks is respectfully solicited.

Claims 1 to 22, 24 to 27, 29 to 41, and 43 to 48 are pending in this application. Claims 19, 22, 27, and 41 have been amended. No new matter is believed to have been added.

Allowed Claims

Claims 1 to 18, 20 to 21, 25 to 26, 32, 35 to 40, 43 to 46, and 48 are allowed or are indicated as being directed to allowable subject matter.

Rejections Under 35 U.S.C. § 102

Examiner has rejected claim 19 as being anticipated by U.S. Patent No. 6,759,151 (Lee). This rejection is respectfully traversed, at least in view of the present amendment that adds the recitation to claim 19 that a coating includes an environmental barrier coating disposed on said second isolation layer and comprising at least about 50 mole % AlTaO₄, and further comprising at least one oxide of an element selected from the group consisting of Ta, Al, Cr, Hf, Ti, Zr, Mo, Nb, Ni, Sr, Mg, Si, and rare earth elements including lanthanide series elements. Lee discloses a coating (layer 12, following the Examiner's lead) that includes Ta₂O₅. However, Lee fails to teach or suggest an environmental barrier coating that includes at least about 50 mole % AlTaO₄. For at least this reason, claim 19 should be allowed.

Examiner has rejected claims 22 to 24, 27, 29 to 30, 33 to 34, 41, and 47 as being anticipated by U.S. Publication No. 2004/0129295 (Perepezko). These rejections are respectfully traversed, at least in view of the present amendment. Independent claims 22 and 41 are amended to recite that a coating includes two sequentially-formed oxygen barrier layers, each including silica or a silicate. In contrast, Perepezko discloses two oxidation resistance or barrier layers, and an underlying diffusion barrier layer (see claims 11 and 12). However, of those three layers, only one (the oxidation barrier layer) includes either silica or a silicate. Thus, Perepezko clearly fails to anticipate claims 22 to 24, 41, and 47.

Further, independent claim 27 is amended to recite first and second isolation layers formed on each side of an oxygen barrier layer, wherein each of the first and second isolation

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No. 5081 P. 14

layers includes Ta_2O_5 , Ta_3Si_3 , $TaSi_2$, $MoSi_2$, and/or Mo_5Si_3 . Perepezko clearly fails to teach or suggest such a structure, and for at least this reason fails to anticipate claims 27, 29 to 30, and 33 to 34.

Conclusion

Based on the above, it is respectfully submitted that the independent claims now present in the application are patentable over the citations of record. The dependent claims are also deemed patentable for the reasons given above with respect to the independent claims and because each recite features which are patentable in its own right. Individual consideration of the dependent claims is respectfully solicited.

The other art of record is also not understood to disclose or suggest the inventive concept of the present invention as defined by the claims.

Hence, Applicants' submit that the present application is in condition for allowance. Favorable reconsideration and withdrawal of the objections and rejections set forth in the above-noted Office Action, and an early Notice of Allowance are requested.

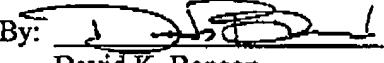
If the Examiner has any comments or suggestions that could place this application in even better form, the Examiner is requested to telephone the undersigned attorney at the below-listed number.

If for some reason Applicant has not paid a sufficient fee for this response, please consider this as authorization to charge Ingrassia, Fisher & Lorenz, Deposit Account No. 50-2091 for any fee which may be due.

Respectfully submitted,

INGRASSIA FISHER & LORENZ

Dated: Nov. 22, 2006

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